MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2017/2018

MID1043 – MULTIMODAL INTERACTION DESIGN

(All sections / Groups)

12 OCTOBER 2017
9.00 a.m. - 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 3 pages with 5 questions only.
2. Answer **FOUR** out of FIVE questions. All questions carry equal marks and the distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

ANSWER 4 OUT OF 5 QUESTIONS (Total 40 marks)

Question 1

(a) Apart from visual and audio as the core multimodal channels, haptic has become another important channel when designing multimodal interaction design. Describe what haptic technology is and the trend of using haptic technology in the current practice.

(2 marks)

(b) Name four (4) applications for haptics technology and provide a brief description for each application.

(8 marks)

(Total: 10 marks)

Question 2

(a) Name five (5) advantages of gesture-based interaction.

(5 marks)

(b) Name the five (5) primary sensations of taste with diagram.

(5 marks)

(Total: 10 marks)

Question 3

(a) In Donald Norman's *Design for Everyday Things,* he emphasized providing a good conceptual model for users. Constraint is considered as one of the four (4) elements of providing a good conceptual model for design. Explain the concept of Constraint. Provide examples to support the design issues of designing constraint.

(2 marks)

(b) There are four (4) types of Constraint.
Name those 4 types of constraints. Provide each type of constraints in real life situation with design solutions.

(8 marks)

(Total: 10 marks)

Continued...

Question 4

(a) Describe audio modality for the followings:

i. Frequency (2 marks)
ii. Loudness (2 marks)
iii. Pitch (2 marks)

(b) Sound can provide information about many aspects of our computing environment. Give an example for each situation below:

i. Physical events
ii. Invisible structure
iii. Dynamic change
iv. Abnormal structure

(4 marks)

(Total: 10 marks)

Question 5

(a) As an interaction designer, metaphor plays an important role in visual design and graphical user interface. Explain metaphor from the perspective below:

i. Linguistic (1 mark)
ii. Visual (1 mark)

(b) Describe the four (4) characteristics of metaphor and direct manipulation for user interface design.

(8 marks)

(Total: 10 marks)

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